

## REMARKS

The Applicants have amended Claim 1 to include the subject matter of Claim 2. Similarly, the Applicants have amended Claim 17 to include the subject matter of Claim 18. As a consequence, the Applicants have cancelled Claims 4, 6, 8, 18, 20, 22 and 24. Entry of the changes into the official file and acknowledgment of the cancellations is respectfully requested.

The Applicants note with appreciation the withdrawal of the previous rejections. The Applicants also note the new rejection of Claims 1-8 and 17-24 under 35 U.S.C. §103 over Hayashi. The Applicants respectfully submit that the rejection is now moot with respect to Claims 4, 6, 8, 18, 20, 22 and 24 in view of their cancellation. Withdrawal of that portion of the rejection is respectfully requested. The Applicants also respectfully submit that Hayashi fails to teach or suggest the subject matter of the remaining claims for the reasons set forth below.

The Applicants respectfully submit that the rejection essentially admits that Hayashi does not teach or suggest the claimed ratio of the amount of the precipitated Nb to the total amount of Nb being from about 5% to about 80%. Instead, the rejection relies on the hypothetical notion that the “steel of Hayashi would inherently have the claimed ratio of Nb because Hayashi teaches (0032) that the cooling after hot rolling is stopped at 400° of less.”

The Applicants respectfully submit as a general matter that an “inherency” position may be employed in a rejection only where the claimed subject matter that is the point of the inherency is “necessarily” present. It is not sufficient to maintain the rejection that the subject matter might be present, could be present, is likely to be present or otherwise. The claimed subject matter must “necessarily” be present for inherency to be employed in a rejection.

The Applicants respectfully submit that this situation clearly does not meet the “necessarily” requirement. In fact, the Applicants respectfully submit that the opposite is true. The Applicants

have discovered that there is a particular step in their manufacturing process that affirmatively causes the amount of precipitated Nb to the total amount of Nb to be from about 5% to about 80%. In this particular situation with respect to Hayashi, Hayashi fails to disclose, teach or suggest the portion of the Applicants' manufacturing process and, therefore, the Applicants respectfully submit that the steels of Hayashi would inherently not likely have the claimed ratio of Nb.

The Applicants have discovered that the claimed steels derive their strength by Nb precipitation. The Applicants particularly discovered that the use of a coiling step in the manufacturing process provides an ample amount of Nb precipitates. The cooling rate of a hot-rolled steel strip after coiling is extremely low. For example, if a coil, after coiling at 600°C, is left as it is in the ambient air for cooling, it takes several hours until it naturally cools to 400°C.

On the other hand, if no coiling step is included in the manufacture of a steel plate, there is not an ample amount of precipitation. In the process of manufacturing a steel plate according to Hayashi, even when the cooling of the steel plate is terminated at 400°C and the steel plate is then left in the ambient surroundings for air-cooling, a period of several tens of minutes typically passes before the plate is naturally cooled to 200°C. Accordingly, the ratio in percent of the amount of precipitated Nb to the total amount of Nb is very likely to be less than 5%.

This is factually supported by the Applicants' Specification whenever the ratio of precipitated Nb of Steel No. 8 in Table 4 is only 4%. In Steel No. 8, the coiling temperature was kept at an extremely low temperature which is essentially the same as leaving the steel plate in the ambient atmosphere. The result of this is the failure of the claimed amount of precipitation of Nb. In particular, the Nb precipitation ratio is 4% in Steel No. 8. This causes the mechanical properties to be quite poor as shown, for example, in the yield strength which is only 540 MPa and the CTOD which

is 0.16.

Thus, according to Hayashi, the strength (YS) of X80 is unable to be obtained and the CTOD value at welds is lowered. The Pcm of the entire steel, included in the range of Hayashi, is high. It can, therefore, hardly be anticipated that the effects of the CTOD at the welds of steels in accordance with the claimed subject matter are achievable.

Hence, the Applicants respectfully submit that the Applicants have demonstrated that the claimed inherent characteristic which is allegedly inherent in the steels of Hayashi in accordance with the rejection are not actually present. The Applicants have demonstrated that the claimed Nb precipitation ratio is not “necessarily” present. In fact, the Applicants have demonstrated that the claimed Nb precipitation ratio is likely not to be present. As a consequence, the Applicants respectfully submit that Hayashi does not disclose steels that inherently have the claimed Nb precipitation ratio. As such, the rejection cannot be maintained. Withdrawal of the rejection is respectfully requested.

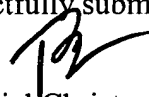
The Applicants note the rejection of Claims 1-8 and 17-24 under 35 U.S.C. §103 over Toru. The Applicants respectfully submit that the rejection is now moot with respect to the cancelled claims. Withdrawal of the rejection of those claims is respectfully requested. With respect to the remaining claims, the Applicants respectfully submit that they are anything but obvious over Toru, essentially for the reasons set forth above with respect to Hayashi.

In particular, the rejection relies on the “inherency” of the claimed precipitation ratio of Nb to be the same as Toru. However, there is no teaching of the coiling step employed by the Applicants. As noted above, the coiling step and its particulars are responsible for the claimed precipitation ratio of Nb. No such coiling step as described by the Applicants is employed by Toru. As a consequence,

there can not “necessarily” inherently be a precipitation ratio of Nb within the claimed range. Referring back to Steel No. 8 in the Applicants’ Specification, it can be seen that situations that employ no coiling or low-temperature coiling which is essentially the same as ambient air cooling result in precipitation ratios of Nb that are outside of the claimed range. The Applicants therefore respectfully submit that they have factually demonstrated that the claimed precipitation ratio of Nb is not “necessarily” present and, therefore, inherency does not and cannot apply. Withdrawal of the rejection based on Toru is respectfully requested.

In light of the foregoing, the Applicants respectfully submit that the entire application is now in condition for allowance, which is respectfully requested.

Respectfully submitted,



T. Daniel Christenbury  
Reg. No. 31,750  
Attorney for Applicants

TDC/as  
(215) 656-3381